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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,092	04/15/2004	T. Douglas Mast	END5313USNP	7164
27805	7590	10/16/2006	EXAMINER	
THOMPSON HINE L.L.P.			TOY, ALEX B	
P.O. BOX 8801				
DAYTON, OH 45401-8801			ART UNIT	PAPER NUMBER
			3739	

DATE MAILED: 10/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/825,092

Applicant(s)

MAST ET AL.

Examiner

Alex B. Toy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-13 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-13 and 15-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/11/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This Office Action is in response to applicant's Request for Continued Examination filed on August 29, 2006.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9-13 and 15-20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ingle (U.S. Pat. No. 6,216,704 B1).

Regarding claim 9, Ingle discloses an ultrasound medical treatment system comprising:

a) an ultrasound medical-treatment transducer 308 (col. 25, ln. 4-10, 52-54 and Figs. 13A-G); and

b) a controller which controls the medical-treatment transducer to emit an ultrasound beam at a first ultrasound acoustic power density to begin to thermally ablate a tissue ablation depth of an area of patient tissue (col. 12, ln. 1-5), wherein the controller reduces the emitted ultrasound beam to a lower second ultrasound acoustic power density based on receiving an indication of an onset in the patient tissue of a

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transient, ultrasound-caused, ultrasound-attenuating effect to complete the thermal ablation of the tissue ablation depth of the area of the patient tissue without re-aiming the emitted ultrasound beam (col. 25, ln. 42-56).

Regarding the transient, ultrasound-caused, ultrasound-attenuating effect, Ingle discloses monitoring for harmonics or subharmonics of the fundamental carrier ultrasound frequency as an indication of the production of cavitation in the tissue (col. 25, ln. 48-50). On page 5, paragraph 21 of applicant's specification, the applicant discloses that an ultrasound-attenuating effect is caused by tissue cavitation among other things. Therefore, the device of Ingle inherently monitors for and indicates a transient, ultrasound-caused, ultrasound-attenuating effect.

Regarding the reduction of ultrasound power, Ingle discloses adjusting the ultrasound power in response to receiving an indication of an ultrasound-attenuating effect (cavitation) (col. 25, ln. 48-52). At the time the invention was made, it would have been obvious to one of ordinary skill in the art, if not inherent, for the adjustment of the ultrasound power of Ingle to mean a reduction in power in order to eliminate the harmful cavitation effect (col. 24, ln. 50-55).

Regarding claim 10, at the time the invention was made, it would have been obvious to one of ordinary skill in the art, if not inherent, for the device of Ingle to monitor for tissue cavitation in order to reduce the power in order to eliminate the harmful cavitation effect (col. 24, ln. 50-55).

Regarding claim 11, the device of Ingle monitors for cavitation using ultrasound imaging (col. 25, ln. 32-52). Based on applicant's specification (pg. 11, ¶ 33), this

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cavitation in combination with the ultrasound inherently causes the inception of a proximal hyperechoic region of patient tissue with distal ultrasound attenuation. Thus, the indication of cavitation in the device of Ingle inherently indicates the onset of the ultrasound-attenuating effect as claimed.

Regarding claim 12, see the rejection of claim 9.

Regarding claim 13, see the rejection of claim 9.

Regarding claim 15, see the rejection of claim 9.

Regarding claim 16, see the rejection of claim 11. Ingle discloses using ultrasound to image the treatment area and indicate the occurrence of the ultrasound-attenuating effect (col. 25, ln. 32-52), and ultrasound imaging inherently uses ultrasound echoes to form the image.

Regarding claim 17, see the rejection of claim 16. Ingle further discloses that the medical-treatment transducer is an ultrasound medical-imaging-and-treatment transducer, and wherein the imaging ultrasound echo is received by the medical-imaging-and-treatment transducer (col. 25, ln. 32-52)

Regarding claim 18, see the rejection of claim 9.

Regarding claim 19, see the rejection of claim 16.

Regarding claim 20, see the rejections of claims 9-11.

Response to Arguments

Applicant's arguments with respect to claims 9-13 and 15-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 4757820 A	USPAT	Itoh; Ayao
US 4798215 A	USPAT	Turner; Paul F.
US 5295484 A	USPAT	Marcus; Frank I. et al.
US 5485839 A	USPAT	Aida; Satoshi et al.
US 5549638 A	USPAT	Burdette; Everette C.
US 5620479 A	USPAT	Diederich; Chris J.
US 5657760 A	USPAT	Ying; Hao et al.
US 5759154 A	USPAT	Hoyns; Dirk V.
US 6001069 A	USPAT	Tachibana; Katsuro et al.
US 6007499 A	USPAT	Martin; Roy W. et al.
US 6361531 B1	USPAT	Hissong; James B.
US 6546934 B1	USPAT	Ingle; Frank et al.
US 6618620 B1	USPAT	Freundlich; David et al.
US 6645202 B1	USPAT	Pless; Benjamin et al.
US 20030220568 A1	US-PGPUB	Hansmann, Douglas R. et al.
US 20050137520 A1	US-PGPUB	Rule, Peter R. et al.
US 6921371 B2	USPAT	Wilson; Richard R.
US 7037306 B2	USPAT	Podany; Vaclav et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex B. Toy whose telephone number is (571) 272-1953. The examiner can normally be reached on Monday through Friday, 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C.M. Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AT *AT*
10/11/06

Michael Peffley
MICHAEL PEFFLEY
PRIMARY EXAMINER